

REMARKS/ARGUMENTS

In response to the Office Action dated June 4, 2003, claim 21 is amended and claim 23 is canceled. Claims 1-22 and 24-40 are now active in this application. No new matter has been added.

The amendment to each dependent claims 2-20, 22 and 24-40 is made to begin each dependent claim with "The" instead of "An". The scope of dependent claims 2-20, 22 and 24-40 is not changed.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 1-40 are rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between elements. The omitted element is: a specific emission material which causes undergoing concentration quenching, as recited in claim 1; or a specific emission material having a fluorescent lifetime shorter than that of the claimed organic material present in the charge transport layer. The Examiner contends that in the absence of this specific emission layer, the claimed feature can not be realized.

The rejection is respectfully traversed.

The pivotal issue generated by a rejection under the second paragraph of 35 U.S.C. § 112 is whether one having ordinary skill in the art, with the supporting specification in hand, would be able to ascertain the scope of the claims with reasonable precision. *In re Moore*, 439 F.2d 1232, 169 USPQ 236 (CCPA 1971); *In re Hammack*, 427 F.2d 1378, 166 USPQ 204 (CCPA 1970). It should be emphasized that unpatented claims are reasonably construed in light of the supporting specification. *In re Okuzawa*, 537 F.2d 545, 190 USPQ 464 (CCPA 1976); *In re Royka*, 490 F.2d

981, 180 USPQ 580 (CCPA 1974). Moreover, reasonable precision is all that is required. See, for example, *U.S. v. Teletronics Inc.*, 857 F.2d 778, 8 USPQ2d 1217; *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 USPQ 81 (Fed. Cir. 1986); *In re Kroekel*, 504 F.2d 1143, 183 USPQ 610 (CCPA 1974).

In determining definiteness, no claim may be read apart from and independent from the disclosure on which it is based. *In re Cohn*, 169 USPQ 95, 98 (CCPA 1971); *In re Kroekel*, 183 USPQ 610, 612 (CCPA 1974):

... claims are not to be considered in a vacuum, "but always in light of the teachings of the prior art and the particular application disclosure as it would be viewed by one possessing the ordinary level of skill in the pertinent art." When considered in light of the prior art and the specification, claims otherwise indefinite may be found reasonably definite.

The emission layer defined in claim 1 is delineated by defining an organic material contained therein as being capable of emitting light on application of voltage thereto along with the definition of the layer thickness. The present specification describes examples of such organic material. It is **NOT** believed that a more specific definition of such an organic material is necessary claim 1. The organic compound may be defined as a fluorescent organic compound in a subsequent stage. Likewise the organic material in claim 21 is defined as one which has a fluorescent lifetime shorter than that of an organic material present in the charge transport layer.

It is believed that the definition in claim 1 of the organic compound is sufficient to define the characteristic feature of the first-mentioned organic material. The same is true for claim 21. Thus, when claims 1 and 21 are read in light of the specification, as is require, a person of ordinary skill in the art would readily understand the metes and bounds of the invention.

Clearly, the Examiner's criticism of the claims is directed to breadth of scope, not indefiniteness and/or incompleteness. As such, the rejection improperly attempts to limit the

scope of the claims by requiring additional limitation(s) under the guise that such limitation(s) is/are necessary to make the claims definite and/or complete. However, the fact that a claim is broad does not justify a rejection on the ground that the claim is indefinite and/or incomplete (see § 706.03(d) of the M.P.E.P.).

While claims are always open to interpretation in light of the disclosure, it is submitted that one having ordinary skill in the art, armed with the present specification, would be able to ascertain the scope of claims 1-40 with reasonable precision. Therefore, there is no genuine question that recited subject matter is set forth with the required degree of particularity, and are complete. Consequently, withdrawal of the present rejection of claims 1-4 under 35 U.S.C. § 112, second paragraph, is respectfully solicited.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 103 AND § 102

I. Claims 1-20, 23 and 27-40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fujita et al. (USPN 6,566,807).

The rejections are respectfully traversed.

Fujita et al. generally teaches an organic electroluminescent device having a similar structure as defined in the present invention. With reference to page 10, lines 6 and onwards of the present specification, Applicants do not gainsay that the arrangement of an electroluminescent unit used in the instant invention is **NOT** known in the art. However, the device of the instant invention has features distinguishable over the prior art in that the emission layer is made of a composition, which comprises an organic material undergoing concentration quenching or an optically quenching phenomenon when its concentration in the emission layer is increased, and the layer thickness is within a range of 4 nm or below. The significance of the thickness range of 4 nm, or below is supported by the results shown in Table 1 of the instant specification.

The Examiner admits that Fujita et al.'s device does not exemplify the emission layer including thickness of 4 nm or below, but contends providing appropriate thickness of the emission layer would have been obvious to one of ordinary skill in the art in view of the associated properties of other associated layers such as type of emission material, physical properties of other associated layers since all of these factors are interdependent.

Clearly, the finding by the Examiner that providing appropriate thickness of the emission layer would have been obvious to one of ordinary skill in the art in view of the associated properties of other associated layers such as type of emission material, physical properties of

other associated layers since all of these factors are interdependent, is not based on any evidence in the record and, therefore, lacks substantial evidence support. See *In re Zurko*, 258 F.3d 1379, 59 USPQ2d 1693 (Fed. Cir. 2001) and *In re Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002).

In rejecting a claim under 35 U.S.C. § 103, the Examiner must provide a factual basis to support the obviousness conclusion. *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967); *In re Lunsford*, 357 F.2d 385, 148 USPQ 721 (CCPA 1966); *In re Freed*, 425 F.2d 785, 165 USPQ 570 (CCPA 1970). Based upon the objective evidence of record, the Examiner is required to make the factual inquiries mandated by *Graham v. John Deere Co.*, 86 S.Ct. 684, 383 U.S. 117, 148 USPQ 459, 469 (1966). The Examiner is also required to explain how and why one having ordinary skill in the art would have been led to modify an applied reference and/or to combine applied references to arrive at the claimed invention. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).

Thus, the Examiner's above noted statement as to obviousness is not based upon facts in the record and merely represents the opinion of the Examiner. Therefore, the Examiner has not met his burden of establishing a *prima facie* basis to deny patentability to the claimed invention under 35 U.S.C. § 103. Consequently, withdrawal of the rejection of claims 1-20, 23 and 27-40 under 35 U.S.C. § 103(a) as being unpatentable over Fujita et al., is respectfully solicited.

II. Claims 21, 22 and 24-26 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Fujita et al. (USPN 6,566,807).

The rejections are respectfully traversed.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention such that the identically claimed invention is placed into possession of one having ordinary skill in the art. *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 200 U.S. App. LEXIS 6300, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994).

The Examiner asserts that he gives no patentable weight to the feature of claim 21 that the organic material has a fluorescent lifetime shorter than that of an organic material present in the charge transport layer, as being narrative and does not have a positive structure. However, it is believed that this limitation is clear and properly limits the organic material in question. More specifically, the claim, in actuality, states that *the fluorescent lifetime of the organic material is shorter than that of an organic material present in the charge transport layer*. Thus, claim 21 clearly recites a property of the organic material, which property cannot be simply disregarded by the Examiner. In this regard, the Examiner provides legal basis to support his position that he can disregard a recited property of a recited material. Consequently, the recited property of the organic material of claim 21 must be considered in determining patentability of claim 21.

At any rate, to expedite prosecution, independent claim 21 is amended to recite:

An organic electroluminescent device, which comprises a pair of electrodes, and a layer structure provided between the pair of electrodes and including a charge transport layer capable of transporting electrons or holes and an emission layer which consists essentially of an organic material capable of emitting light on application of a voltage thereto via the pair of electrodes and is in the form of islands, wherein the organic material has a fluorescent lifetime shorter than that of an organic material present in the charge transport layer.

It should be noted that independent claim 21 is amended by incorporating the feature of claim 23, now canceled. The excellence of the organic electroluminescent device using an

emission layer in the form of islands will be apparent from the results of Table 1 in Example 1 of the present application. In Table 1, the relationship between the thickness of the emission layer (nm) and the luminous efficiency and drive life is particularly indicated. At page 21, line 16 to 19 of the specification, it is stated that when the emission layer thickness is 1 nm or below, the layer is formed as islands, with good results being obtained.

Fujita et al. teaches various types of organic electroluminescent elements comprising at least a light emitting layer containing an organic light emitting material placed between an anode and a cathode. Although mention is made of a relatively thick light emitting layer having a thickness, for example, of 20 nm or 50 nm, a very thin emitting layer, or islands-shaped emitting layer, is not taught or suggested in Fujita et al., not to mention the fact of the remarkably improved characteristics obtained from such an islands-shaped emitting layer.

The above noted difference between the device of amended independent claim 21 vis-à-vis the device of Fujita et al. evinces that Fujita et al. does **NOT** identically describe the now claimed invention within the meaning of 35 U.S.C. § 102. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986).

Applicants, therefore, submit that amended independent claim 21, as well as dependent claims 22 and 24-26, are patentable over Fujita et al., and the allowance of claims 21, 22 and 24-26, as amended), is respectfully solicited.

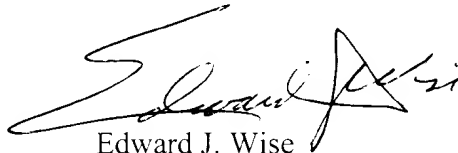
CONCLUSION

Accordingly, it is urged that the application, as now amended, is in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY

A handwritten signature in black ink, appearing to read "Edward J. Wise", with a stylized flourish at the end.

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